

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ROCKY POND	Lake Area (ha): 29.95
Town: GILMANTON	Maximum depth (m): 12.2
County: Belknap	Mean depth (m): 4.5
River Basin: Merrimack	Volume (m <sup>3</sup> ): 1501000
Latitude: 43°24'04" N	Relative depth: 1.9
Longitude: 71°27'16" W	Shore configuration: 1.27
Elevation (ft): 520	Areal water load (m/yr): 15.03
Shore length (m): 2600	Flushing rate (yr <sup>-1</sup> ): 3.30
Watershed area (ha): 1162.3	P retention coeff.: 0.50
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

5 February 2003

27 June 2002

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 80%	MALLOMONAS 90%
	#2		ASTERIONELLA 5%
	#3	(ALL ALGAE SPARSE)	CHRYSPHAERELLA 3%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 38%	NAUPLIUS LARVA 25%
	#2		KERATELLA 21%
	#3	(ZOOPLANKTON SPARSE)	KELICOTTIA 17%
ROTIFERS/LITER		7	79
MICROCRUSTACEA/LITER		15	57
ZOOPLANKTON ABUNDANCE (#/L)		24	143
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			3.8
BOTTOM DISSOLVED OXYGEN (mg/L)		5.0	0.0
BACTERIA (E. coli, #/100 ml)	#1		3
	#2		3
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.2  
Hypolimnion volume (m<sup>3</sup>): 364500  
Anoxic volume (m<sup>3</sup>): 16500

**CHEMICAL:**

Lake: ROCKY POND

Town: GILMANTON

	5 February 2003		27 June 2002		
DEPTH (m)	3.5	7.0	2.0	5.0	9.0
pH (units)	6.2	6.1	6.3	6.1	5.9
A.N.C. (Alkalinity)	5.8	5.9	4.7	5.0	5.7
NITRATE NITROGEN	0.06	0.07	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.25	< 0.25	0.30	< 0.25	0.30
TOTAL PHOSPHORUS	0.006	0.007	0.010	0.009	0.021
CONDUCTIVITY ( $\mu$ mhos/cm)	129.5	134.2	96.0	108.4	117.0
APPARENT COLOR (cpu)	33	33	35	32	55
MAGNESIUM			1.19		
CALCIUM			3.8		
SODIUM			11.4		
POTASSIUM			0.50		
CHLORIDE	23	25	16		21
SULFATE	10	10	8		9
TN : TP			30		14
CALCITE SATURATION INDEX			3.7		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 2002**

D.O. S.D. PLANT CHL TOTAL CLASS

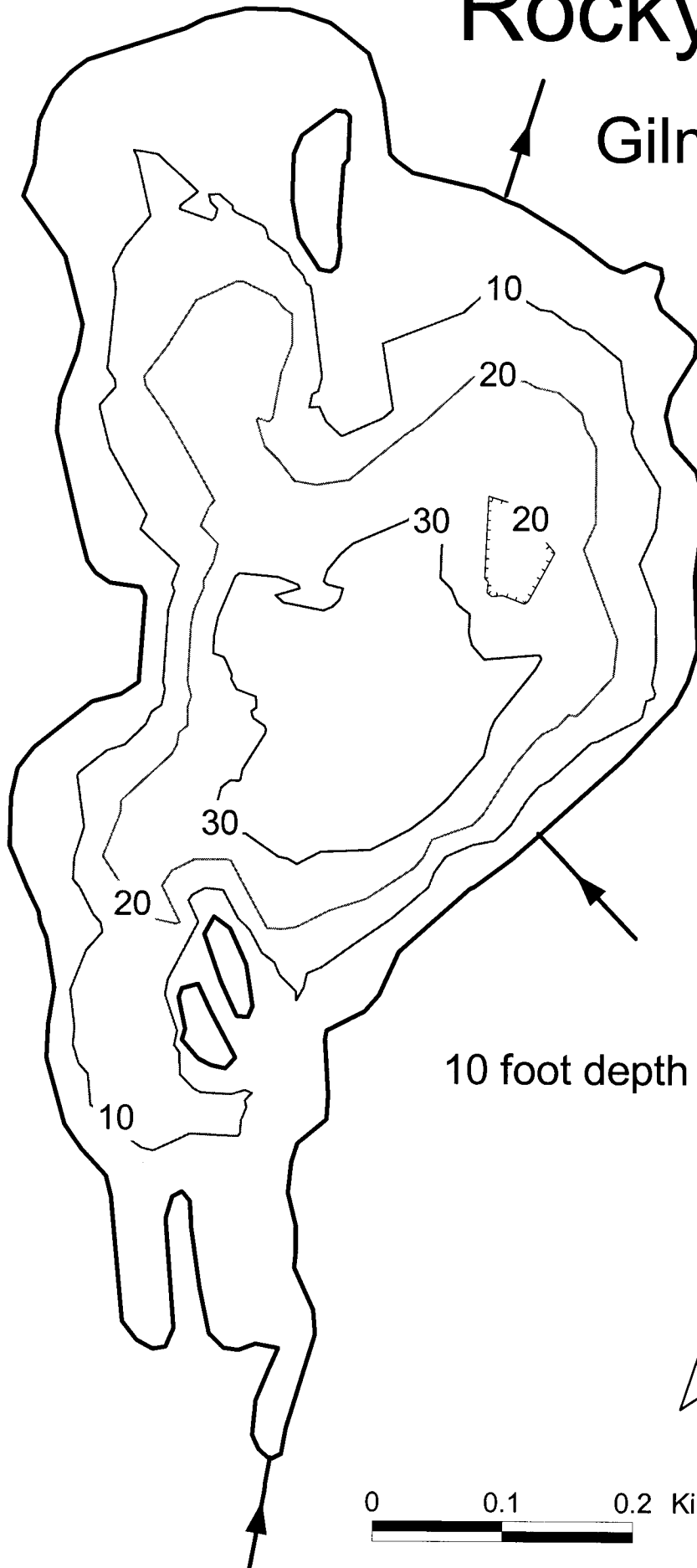
5	2	3	1	11	Meso.
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**COMMENTS:**

1. Previously surveyed in 1982; no change in trophic class and little change in trophic parameters between the two years.
2. Lab accident made chlorophyll value suspect and is not reported. For purposes of classification, a chlorophyll value of 4 to 8 was estimated, based on comparing trophic data between the two years, which resulted in the mesotrophic classification.
3. Rough launch site with little parking. Launch area was not marked – it was off a small dirt road at the southern end of the pond.
4. Slightly elevated sodium, chloride and conductivity values suggest some road salt runoff to the pond.

# Rocky Pond

Gilmanton



10 foot depth contours

N

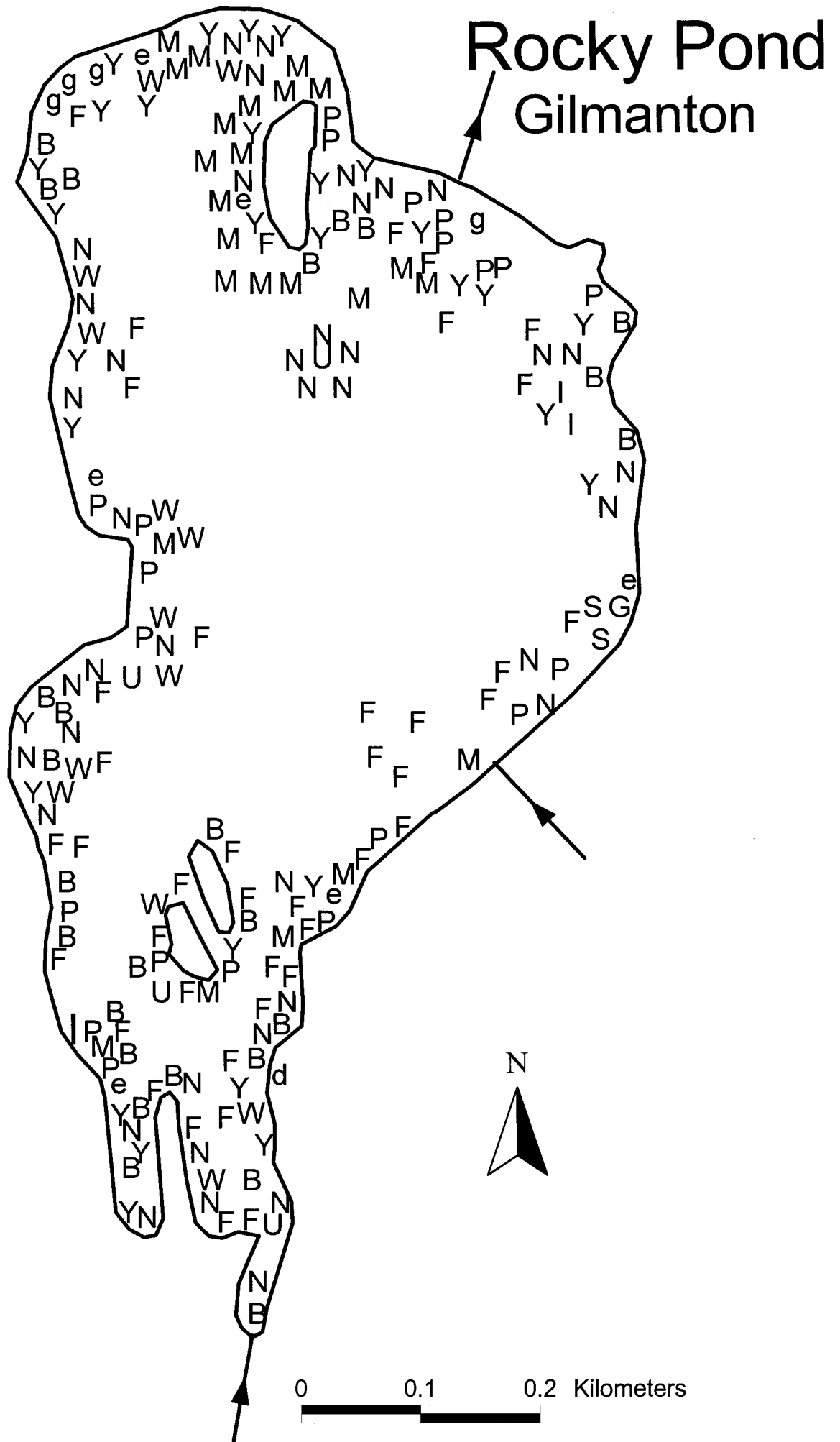
0 0.1 0.2 Kilometers

LAKE: ROCKY POND  
DATE: 06/27/2002

**WEATHER:** Partly sunny & breezy

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SECCHI DISK (m): 3.8
BOTTOM DEPTH (m): 11.4
TIME: 1150
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\*Dissolved oxygen values are in mg/L



[illegible]